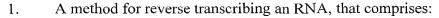
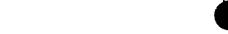


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- (a) providing a reverse transcription reaction mixture comprising said RNA, a primer, a divalent cation, and a mutant thermoactive DNA polymerase, wherein said mutant DNA polymerase is characterized in that
 - i) in its native form said DNA polymerase comprises an amino acid sequence that is SEQ ID NO: 1;
 - ii) the amino acid at position 4 of said amino acid sequence is mutated in comparison to said native sequence to an amino acid other than E, A, G, or P; and
- 10 (b) treating said reaction mixture at a temperature sufficient for said mutant DNA polymerase to initiate synthesis of an extension product of said primer to provide a cDNA molecule complementary to said RNA.
 - 2. The method of Claim 1, wherein said amino acid sequence is SEQ ID NO: 2.
 - 3. The method of Claim 1, wherein said amino acid sequence is SEQ ID NO: 3.
 - 4. The method of Claim 1, wherein said amino acid sequence is SEQ ID NO: 4.
- 20 5. The method of Claim 1, wherein said amino acid sequence is SEQ ID NO: 5.
 - 6. The method of Claim 1, wherein said amino acid sequence is SEQ ID NO: 6.
- 7. The method of Claim 1, wherein said amino acid sequence is SEQ ID NO: 7.
 - 8. A method of Claim 1, wherein said mutant DNA polymerase is thermostable.
- 9. The method of claim 1, wherein said DNA polymerase is a mutant form of a 30 *Thermus* species DNA polymerase.
 - 10. The method of claim 1, wherein said DNA polymerase is a mutant form of *Thermus thermophilus* DNA polymerase or *Thermus aquaticus* DNA polymerase.



- 11. The method of Claim 1, wherein said temperature of said reaction mixture in step (b) is between 40°C and 80°C.
- 12. The method of Claim 1, wherein said amino acid at position 4 of said amino acid sequence is mutated in comparison to said native sequence to an amino acid other than E, A, G, P, Q, or D.
 - 13. A method for reverse transcribing an RNA, that comprises:
- (a) providing a reverse transcription reaction mixture comprising said RNA, a primer, Mg⁺², and a mutant thermoactive DNA polymerase, wherein said mutant DNA polymerase is characterized in that
 - i) in its native form said DNA polymerase comprises an amino acid sequence that is SEQ ID NO: 1;
- ii) the amino acid at position 4 of said amino acid sequence is mutated in comparison to said native sequence to an amino acid other than E, A, G, or P; and (b) treating said reaction mixture at a temperature sufficient for said mutant DNA polymerase to initiate synthesis of an extension product of said primer to provide a cDNA molecule complementary to said RNA.
- 20 14. The method of Claim 13, wherein said amino acid sequence is SEQ ID NO: 2.
 - 15. The method of Claim 13, wherein said amino acid sequence is SEQ ID NO: 3.
- 16. The method of Claim 13, wherein said amino acid sequence is SEQ ID NO: 4.
 - 17. The method of Claim 13, wherein said amino acid sequence is SEQ ID NO: 5.
 - 18. The method of Claim 13, wherein said amino acid sequence is SEQ ID NO: 6.
- 30 19. The method of Claim 13, wherein said amino acid sequence is SEQ ID NO: 7.
 - 20. The method of Claim 13, wherein said mutant DNA polymerase is thermostable.



- The method of Claim 13, wherein said DNA polymerase is a mutant form of a 21. Thermus species DNA polymerase.
- 22. The method of Claim 13, wherein said DNA polymerase is a mutant form of 5 Thermus thermophilus DNA polymerase or Thermus aquaticus DNA polymerase.
 - 23. The method of Claim 13, wherein said temperature of said reaction mixture in step (b) is between 40°C and 80°C.
- 10 24. The method of Claim 13, wherein said amino acid at position 4 of said amino acid sequence is mutated in comparison to said native sequence to an amino acid other than E, A, G, P, Q, or D.
 - A method for amplifying an RNA, that comprise: 25.
- (a) reverse transcribing said RNA according to a method of Claim 1 to provide a 15 cDNA;
 - (b) amplifying said cDNA.
- 26. A method of Claim 25, wherein in step (b) said amplifying is carried out using a polymerase chain reaction. 20
 - 27. A method for amplifying an RNA, that comprise:
 - (a) reverse transcribing said RNA according to a method of Claim 13 to provide a cDNA;
- 25 (b) amplifying said cDNA.
 - 28. A method of Claim 27, wherein in step (b) said amplifying is carried out using a polymerase chain reaction.

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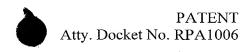
- 29. A method for amplifying an RNA using a single-enzyme reverse transcription/amplification reaction, that comprises:
- (a) providing an amplification reaction mixture comprising said RNA, a pair of primers, a divalent cation, and a mutant thermostable DNA polymerase, wherein said mutant DNA polymerase is characterized in that
 - i) in its native form said DNA polymerase comprises an amino acid sequence that is SEQ ID NO: 1;
 - ii) the amino acid at position 4 of said amino acid sequence is mutated in comparison to said native sequence to an amino acid other than E, A, G, or P; and
- (b) treating said reaction mixture at a temperature sufficient for said mutant DNA polymerase to initiate synthesis of an extension product of said primer to provide a cDNA molecule complementary to said RNA;
 - (c) treating said reaction mixture at an appropriate temperature for said mutant DNA polymerase to initiate synthesis of an extension product of said second primer to provide a double-stranded cDNA molecule; and
 - (d) amplifying said double-stranded cDNA molecule of step (c) by a polymerase chain reaction.
 - 30. The method of Claim 29, wherein said amino acid sequence is SEQ ID NO: 2.
 - 31. The method of Claim 29, wherein said amino acid sequence is SEQ ID NO: 3.
 - 32. The method of Claim 29, wherein said amino acid sequence is SEQ ID NO: 4.
- 25 33. The method of Claim 29, wherein said amino acid sequence is SEQ ID NO: 5.
 - 34. The method of Claim 29, wherein said amino acid sequence is SEQ ID NO: 6.
 - 35. The method of Claim 29, wherein said amino acid sequence is SEQ ID NO: 7.
 - 36. The method of Claim 29, wherein said mutant DNA polymerase is thermostable.
 - 37. The method of Claim 29, wherein said DNA polymerase is a mutant form of a *Thermus* species DNA polymerase.

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- 38. The method of Claim 29, wherein said DNA polymerase is a mutant form of *Thermus thermophilus* DNA polymerase or *Thermus aquaticus* DNA polymerase.
- 5 39. The method of Claim 29, wherein said temperature of said reaction mixture in step (b) is between 40°C and 80°C.
 - 40. The method of Claim 29, wherein said amino acid at position 4 of said amino acid sequence is mutated in comparison to said native sequence to an amino acid other than E, A, G, P, Q, or D.
 - 41. A method for amplifying an RNA using a single-enzyme reverse transcription/amplification reaction, that comprises:
- (a) providing an amplification reaction mixture comprising said RNA, a pair of primers, Mg⁺², and a mutant thermostable DNA polymerase, wherein said mutant DNA polymerase is characterized in that
 - i) in its native form said DNA polymerase comprises an amino acid sequence that is SEQ ID NO: 1;
 - ii) the amino acid at position 4 of said amino acid sequence is mutated in comparison to said native sequence to an amino acid other than E, A, G, or P; and
 - (b) treating said reaction mixture at a temperature sufficient for said mutant DNA polymerase to initiate synthesis of an extension product of said primer to provide a cDNA molecule complementary to said RNA;
- (c) treating said reaction mixture at an appropriate temperature for said mutant
 DNA polymerase to initiate synthesis of an extension product of said second primer to provide a double-stranded cDNA molecule; and
 - (d) amplifying said double-stranded cDNA molecule of step (c) by a polymerase chain reaction.
- 30 42. The method of Claim 41, wherein said amino acid sequence is SEQ ID NO: 2.
 - 43. The method of Claim 41, wherein said amino acid sequence is SEQ ID NO: 3.

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- 44. The method of Claim 41, wherein said amino acid sequence is SEQ ID NO: 4.
- 45. The method of Claim 41, wherein said amino acid sequence is SEQ ID NO: 5.
- 46. The method of Claim 41, wherein said amino acid sequence is SEQ ID NO: 6.
- 47. The method of Claim 41, wherein said amino acid sequence is SEQ ID NO: 7.
- 10 48. The method of Claim 41, wherein said mutant DNA polymerase is thermostable.
 - 49. The method of Claim 41, wherein said DNA polymerase is a mutant form of a *Thermus* species DNA polymerase.
- 15 50. The method of Claim 41, wherein said DNA polymerase is a mutant form of *Thermus thermophilus* DNA polymerase or *Thermus aquaticus* DNA polymerase.
 - 51. The method of Claim 41, wherein said temperature of said reaction mixture in step (b) is between 40°C and 80°C.
 - 52. The method of Claim 41, wherein said amino acid at position 4 of said amino acid sequence is mutated in comparison to said native sequence to an amino acid other than E, A, G, P, Q, or D.